

Form PTO-1449 (modified)		Atty. Docket No. MECO214/KAM	Serial No.
List of Patents and Publications for Applicant's INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		Applicant James A. Baum, Amy Jelen Gilmer, Anne-Marie Light Mettus	
U.S. Patent Documents <i>See Page 1</i>		Filing Date: Concurrently Herewith	Group: 105-3
		Other Art <i>See Page 2</i>	

10/05/01
10/97-09/97-175
10/05/01

U.S. Patent Documents

Exam. Init.	Ref. Des.	Document Number	Date	Name	Class	Sub Class	Filing Date of App.
<i>rec</i>	A1	4,448,885	05/15/84	Schnepf <i>et al.</i>	435	253	
	A2	4,467,036	08/21/84	Schnepf <i>et al.</i>	435	317	
	A3	4,766,203	08/23/88	Krieg <i>et al.</i>	530	370	
	A4	4,797,279	01/10/89	Karamata <i>et al.</i>	424	93	
	A5	4,910,016	03/20/90	Gaertner <i>et al.</i>	424	93	
	A6	5,024,837	06/18/91	Donovan <i>et al.</i>	424	93	
	A7	5,126,133	06/30/92	Payne <i>et al.</i>	424	93	
	A8	5,188,960	02/23/93	Payne <i>et al.</i>	435	252.3	
	A9	5,322,687	06/21/94	Donovan <i>et al.</i>	424	93	
	A10	5,441,884	08/15/95	Baum	435	252.31	
	A11	5,500,365	03/19/96	Fischhoff <i>et al.</i>	435	240.4	
	A15	5,567,600	10/22/96	Adang <i>et al.</i>	536	23.71	
	A14	5,567,862	10/22/96	Adang <i>et al.</i>	800	205	
	A13	5,573,766	11/12/96	Blenk <i>et al.</i>	424	93.461	
	A12	5,589,382	12/31/96	Payne <i>et al.</i>	435	252.5	
	A11	5,659,123	08/19/97	Van Rie <i>et al.</i>	800	205	
<i>rec</i>	A12	6,033,874	03/07/00	Baum <i>et al.</i>	435	69.1	

Foreign Patent Documents

Exam. Init.	Ref. Des.	Document Number	Date	Country	Class	Sub Class	Translation Yes/No
<i>rec</i>	B1	WO88/09812	12/15/88	PCT			Abstract
<i>rec</i>	B2	WO91/16433	10/31/91	PCT			Yes

EXAMINER: *KCCarlson*

DATE CONSIDERED: *12-11-03*

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Form PTO-1449 (modified)		Atty. Docket No. MECO214/KAM	Serial No. 09/1972 175
List of Patents and Publications for Applicant's INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		Applicant James A. Baum, Amy Jelen Gilmer, Anne-Marie Light Mettus	
		Filing Date: Concurrently Herewith	Group: 1653
U.S. Patent Documents <i>See Page 1</i>	Foreign Patent Documents <i>See Page 1</i>	Other Art <i>See Page 2</i>	

Foreign Patent Documents

Exam. Init.	Ref. Des.	Document Number	Date	Country	Class	Sub Class	Translation Yes/No
<i>cc</i>	B3	WO93/03154	02/18/93	PCT	—	—	Yes
	B4	WO95/02058	01/19/95	PCT	—	—	Yes
	B5	WO95/06730	03/09/95	PCT	—	—	
	B6	0295156B1	12/14/88	Europe	—	—	Abstract
	B7	EP 0408403	01/16/91	Europe	—	—	
	B8	EP 0405810	01/02/91	Europe	—	—	
<i>cc</i>	B9	EP 0193259	03/09/86	Europe	—	—	

Other Art (Including Author, Title, Date Pertinent Pages, Etc.)

Exam. Init.	Ref. Des.	Citation
<i>cc</i>	C1	Almond and Dean, "Suppression of Protein Structure Destabilizing Mutations in <i>Bacillus thuringiensis</i> Delta Endotoxins by Second Site Mutations," <i>Biochemistry</i> , 32:1040-1046, 1993.
	C2	Angsuthanasombat <i>et al.</i> , "Effects on Toxicity of Eliminating a Cleavage Site in a Predicted Interhelical Loop in <i>Bacillus thuringiensis</i> CryIVB δ-Endotoxin," <i>FEMS Microbiol. Lett.</i> , 111:255-262, 1993.
	C3	Aronson <i>et al.</i> , "Mutagenesis of Specificity and Toxicity Regions of a <i>Bacillus thuringiensis</i> Protoxin Gene," <i>Journal of Bacteriology</i> , 177(14):4059-4065, July 1995.
	C4	Baum, "Tnpl Recombinase: Identification of Sites within Tn5401 Required for Tnpl Binding and Site-Specific Recombination," <i>Journal of Bacteriology</i> , 177(14):4036-4042, July 1995.
	C5	Baum <i>et al.</i> , "Novel Cloning Vectors for <i>Bacillus thuringiensis</i> ," <i>Applied and Environmental Microbiology</i> , 56(11):3420-3428, November 1990.
<i>cc</i>	C6	Caramori <i>et al.</i> , "In vivo Generation of Hybrids Between Two <i>Bacillus thuringiensis</i> Insect-Toxin-Encoding Genes," <i>Gene</i> , 98:37-44, 1991.

EXAMINER: *K. Carlson*DATE CONSIDERED: *12-11-93*

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INFORMATION DISCLOSURE STATEMENT — PTO-1449 (MODIFIED)

Form PTO-1449 (modified)		Atty. Docket No. MECO214/KAM	Serial No. 09/1972175
List of Patents and Publications for Applicant's INFORMATION DISCLOSURE STATEMENT <small>(Use several sheets if necessary)</small>			
U.S. Patent Documents <i>See Page 1</i>		Foreign Patent Documents <i>See Page 1</i>	Other Art <i>See Page 2</i>

Other Art (Including Author, Title, Date Pertinent Pages, Etc.)

Exam. Init.	Ref. Des.	Citation
	C7	Chambers <i>et al.</i> , "Isolation and Characterization of a Novel Insecticidal Crystal Protein Gene from <i>Bacillus thuringiensis</i> subsp. <i>Aizawai</i> ," <i>Journal of Bacteriology</i> , 173(13):3966-3976, July 1991.
	C8	Chen <i>et al.</i> , "Site-directed Mutations in a Highly Conserved Region of <i>Bacillus thuringiensis</i> Delta-endotoxin Affect Inhibition of Short-circuit Current Across <i>Bombyx mori</i> Midguts," <i>Proc. Natl. Acad. Sci.</i> , 90:9041-9045, October 1993.
	C9	Chen <i>et al.</i> , "Mutations in Domain I of <i>Bacillus thuringiensis</i> δ-Endotoxin CryIAb Reduce the Irreversible Binding of Toxin to <i>Manduca sexta</i> Brush Border Membrane Vesicles," <i>J. Biol. Chem.</i> , 270(11):6412-6419, March 1995.
	C10	De Maagd <i>et al.</i> , "Domain III Substitution in <i>Bacillus thuringiensis</i> Dekta-Endotoxin CryIA(b) Results in Superior Toxicity for <i>Spodoptera exigua</i> and Altered Membrane Protein Recognition," <i>Applied and Environmental Microbiology</i> , 62(5):1537-1543, May 1996.
	C11	Donovan <i>et al.</i> , "Amino Acid Sequence and Entomocidal Activity of the P2 Crystal Protein," <i>J. Biol. Chem.</i> , 263(1):561-567, January 1988.
	C12	English and Slatin, "Mode of Action of Delta-Endotoxins from <i>Bacillus thuringiensis</i> : A Comparison with Other Bacterial Toxins," <i>Insect Biochem. Molec. Biol.</i> , 22(1):1-7, 1992.
	C13	Gazit and Shai, "Structural and Functional Characterization of the α5 Segment of <i>Bacillus thuringiensis</i> δ-Endotoxin," <i>Biochemistry</i> , 32(13):3429-3436, 1993.
	C14	Gazit and Shai, "The Assembly and Organization of the α5 and α7 Helices from the Pore-forming Domain of <i>Bacillus thuringiensis</i> δ-Endotoxin," <i>J. Biol. Chem.</i> , 270(6):2571-2578, February 1995.
	C15	Ge <i>et al.</i> , "Functional Domains of <i>Bacillus thuringiensis</i> Insecticidal Crystal Proteins," <i>J. Biol. Chem.</i> , 266(27):17954-17958, September 1991.
	C16	Grochulski <i>et al.</i> , "Bacillus thuringiensis CryIA(a) Insecticidal Toxin: Crystal Structure and Channel Formation," <i>J. Mol. Biol.</i> , 254:447-464, 1995.
1cc	C17	Hofte and Whiteley, "Insecticidal Crystal Proteins of <i>Bacillus thuringiensis</i> ," <i>Microbiological Review</i> , 53(2):242-255, June 1989.

EXAMINER: *K Carlson*DATE CONSIDERED: *12-11-03*

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Exam. Init.	Ref. Des.	Citation
1cc	C18	Hofte <i>et al.</i> , "Structural and functional analysis of a cloned delta endotoxin of <i>Bacillus thuringiensis</i> berliner 1715," <i>Eur. J. Biochem.</i> , 161:273-280, 1986.
	C19	Honée <i>et al.</i> , "Nucleotide sequence of crystal isolated from <i>B. thuringiensis</i> subspecies <i>entomocidus</i> 60.5 coding for a toxin highly active against <i>Spodoptera</i> species," <i>Nucleic Acids Research</i> , 16(13):6240, 1988.
	C20	Krieg <i>et al.</i> , " <i>Bacillus thuringiensis</i> var. <i>Tenebrionis</i> : ein neuer, gegenüber Larven von Coleopteren wirksamer Pathotyp," <i>Z. ang. Ent.</i> , 96:500-508, 1983.
	C21	Kwak <i>et al.</i> , "Exploration of Receptor Binding of <i>Bacillus thuringiensis</i> Toxins," <i>Mem Inst. Oswaldo</i> , 90(1):75-79, January/February 1995.
	C22	Lambert <i>et al.</i> , "A <i>Bacillus thuringiensis</i> Insecticidal Crystal Protein with a High Activity against Members of the Family Noctuidae," <i>Applied and Environmental Microbiology</i> , 62(1):80-86, January 1996.
	C23	Lee <i>et al.</i> , "Location of a <i>Bombyx mori</i> Receptor Binding Region on a <i>Bacillus thuringiensis</i> δ-Endotoxin," <i>J. Biol. Chem.</i> , 267(5):3115-3121, February 1992.
	C24	Lee <i>et al.</i> , "Domain III Exchanges of <i>Bacillus thuringiensis</i> CryIA Toxins Affect Binding to Different Gypsy Moth Midgut Receptors," <i>Biochemical And Biophysical Research Communications</i> , 216(1):306-312, November 1995.
	C25	Lu <i>et al.</i> , "Identification of Amino Acid Residues of <i>Bacillus thuringiensis</i> δ-Endotoxin CryIAa Associated with Membrane Binding and Toxicity to <i>Bombyx mori</i> ," <i>J. of Bacteriology</i> , 176(17):5554-5559, September 1994.
	C26	Mettus and Macaluso, "Expression of <i>Bacillus thuringiensis</i> δ-Endotoxin Genes during Vegetative Growth," <i>Applied and Environmental Microbiology</i> , 56(4):1128-1134, April 1990.
	C27	Rajamohan <i>et al.</i> , "Single Amino Acid Changes in Domain II of <i>Bacillus thuringiensis</i> CryIAb δ-Endotoxin Affect Irreversible Binding to <i>Manduca sexta</i> Midgut Membrane Vesicles," <i>J. of Bacteriology</i> , 177(9):2276-2282, May 1995.
1cc	C28	Rajamohan <i>et al.</i> , "Role of Domain II, Loop 2 Residues of <i>Bacillus thuringiensis</i> CryIAb δ-Endotoxin in Reversible and Irreversible Binding to <i>Manduca sexta</i> and <i>Heliothis virescens</i> ," <i>J. of Biological Chemistry</i> , 271(5):2390-2396, February 1996.

EXAMINER: *JCC Carlson*DATE CONSIDERED: *12-11-03*

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Exam. Init.	Ref. Des.	Citation
cc	C29	Sanchis <i>et al.</i> , "Multiplicity of δ -endotoxin genes with different insecticidal specificities in <i>Bacillus thuringiensis aizawai</i> 7.29," <i>Molecular Microbiology</i> , 2(3):393-404, 1988.
	C30	Sanchis <i>et al.</i> , "Nucleotide sequence and analysis of the <i>N</i> -terminal coding region of the <i>Spodoptera</i> -active δ -endotoxin gene of <i>Bacillus thuringiensis aizawai</i> 7.29," <i>Molecular Microbiology</i> , 3(2):229-238, 1989.
	C31	Smedley and Ellar, "Mutagenesis of three surface-exposed loops of a <i>Bacillus thuringiensis</i> insecticidal toxin reveals residues important for toxicity, receptor recognition and possibly membrane insertion," <i>Microbiology</i> , 142:1617-1624, 1996.
	C32	Smith <i>et al.</i> , "Mosquitocidal Activity of the CryIC δ -Endotoxin from <i>Bacillus thuringiensis</i> subsp. <i>aizawai</i> ," <i>Applied and Environmental Microbiology</i> , 62(2):680-684, February 1996.
	C33	Smith and Ellar, "Mutagenesis of two surface-exposed loops of the <i>Bacillus thuringiensis</i> CryIC δ -endotoxin affects insecticidal specificity," <i>Biochem. J.</i> , 302:611-616, 1994.
	C34	von Tersch <i>et al.</i> , "Membrane-Permeabilizing Activities of <i>Bacillus thuringiensis</i> , Coleopteran-Active Toxin CryIIB2 and CryIIB2 Domain I Peptide," <i>Applied and Environmental Microbiology</i> , 60(10):3711-3717, October 1994.
	C35	Wolfersberger <i>et al.</i> , "Site-Directed Mutations in the Third Domain of <i>Bacillus thuringiensis</i> δ -Endotoxin CryIAa Affect Its Ability to Increase the Permeability of <i>Bombyx mori</i> Midgut Brush Border Membrane Vesicles," <i>Applied and Environmental Microbiology</i> , 62(1):279-282, January 1996.
	C36	Wu and Aronson, "Localized Mutagenesis Defines Regions of the <i>Bacillus thuringiensis</i> δ -Endotoxin Involved in Toxicity and Specificity," <i>J. of Biol. Chem.</i> , 267(4):2311-2317, February 1992.
	C37	Wu and Dean, "Functional Significance of Loops in The Receptor Binding Domain of <i>Bacillus thuringiensis</i> CryIIIA δ -Endotoxin," <i>J. Mol. Biol.</i> , 255:628-640, 1996.
	C38	Dean <i>et al.</i> , "Probing the mechanism of action of <i>Bacillus thuringiensis</i> insecticidal proteins by site-directed mutagenesis - a minireview," <i>Gene</i> , 179:111-117, 1996.
cc	C39	International Search Report dated April 21, 1998 (PCT/US97/22181)(MECO:206P).

EXAMINER: *KC Carlson*

DATE CONSIDERED:

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Other Art (Including Author, Title, Date Pertinent Pages, Etc.)		
Exam. Init.	Ref. Des.	Citation
<i>CC</i>	C40	Nakamura <i>et al.</i> , "Insecticidal activity and processing in larval gut juices of genetically engineered 130-kDa proteins of <i>Bacillus thuringiensis</i> subsp. <i>aizawai</i> ," <i>Biosci. Biotech. Biochem.</i> , 56(1):1-7, 1992.
	C41	Kalman <i>et al.</i> , "Cloning of a novel <i>CryIC</i> -type gene from a strain of <i>Bacillus thuringiensis</i> subsp. <i>galleriae</i> ," <i>Applied and Environmental Microbiology</i> , 59(4):1131-1137, 1993.
	C42	Li <i>et al.</i> , "Crystal structure of insecticidal δ -endotoxin from <i>Bacillus thuringiensis</i> at 2.5 Å resolution," <i>Nature</i> , 353:815-821, 1991.
	C43	Schnepf and Whiteley, "Cloning and expression of the <i>Bacillus thuringiensis</i> crystal protein gene in <i>Escherichia coli</i> ," <i>Proc. Natl. Acad. Sci. USA</i> , 78(5):2893-2897, 1981.
	C44	Schnepf <i>et al.</i> , "The amino acid sequence of a crystal protein from <i>Bacillus thuringiensis</i> deduced from the DNA base sequence," <i>J. Biol. Chem.</i> , 260(10):6264-6272, 1985.
<i>CC</i>	C45	Walters <i>et al.</i> , "Ion channel activity of n-terminal fragments from <i>CryIA(c)</i> delta-endotoxin," <i>Biochem. Biophys. Res. Comm.</i> , 196(2):921-926, 1993.

EXAMINER: <i>H. Carbon</i>	DATE CONSIDERED: <i>12-11-03</i>
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